

## On the structure of action of consciousness

著者	Abe Mansyu
journal or publication title	Tohoku psychologica folia
volume	5
number	3
page range	125-144
year	1937-12-25
URL	<a href="http://hdl.handle.net/10097/00130403">http://hdl.handle.net/10097/00130403</a>

# On the structure of action of consciousness<sup>1</sup>

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## I The quality of psychic action

### General treatise

When we observe and introspect minutely the activity of consciousness, we can get an insight into the structure of the activity of consciousness. Here I shall describe the structure of psychic action<sup>2</sup>, which is the fundamental modality of activity of consciousness.

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<sup>1</sup> I made a treatise concerning this theme (though it does not contain the part of I. section) at the Meeting of Japanese Psychological Association, 1937. This Japanese report will be published before long.

<sup>2</sup> I have applied here the word psychic action to the German word *Akt* (des Bewußtsein).

The principal analytical inquiries into the structure of consciousness of the present age are Husserl's phenomenological treatise on the structure of consciousness, *Aktpsychologie* and *Denkpsychologie*, all of which come originally from Fr. Brentano's idea on consciousness, and our problem too lies between these inquiries, especially the treatise on the intentionality of consciousness-act. But we refrain here from the logical consideration on the psychic act. We can describe the intentionality of consciousness-act more correctly and minutely by observing our real personal experience than by logical consideration. Though the division of the activity of consciousness into the categories of action and of contents usually seems difficult in our real experience, we need not give it up, for insight on the basis of this partition is not always impossible, and I have tried here to describe especially the structure of acts of consciousness.

The method on which we have worked may be called the observation-method on critical situations, that is, the method of observing the structure of consciousness in extreme conditions (situations). In my opinion critical observation contains at the same time observations on extreme (critical) construction of consciousness, which are got by the common observation-method. Therefore critical observations too, can be attained without any critical procedure and thus we can get minute insight by means of keen analysis into the construction of consciousness. And the observation-method, used in the experimental observation of II. section, may also be deemed to have this critical quality.

We can consider that this observation on extreme modality of consciousness originated above all from the study of idea and thought process. This fact depends on the circumstance that psychic activity of such mental structure is concerned inevitably with the inner mechanism of consciousness. Thus hitherto the *Denkpsychological* study has mainly given consideration to fundamental modality of consciousness and above all to intentionality of actions of consciousness, which is the ultimate structure of psychic activity.

The intentionality of consciousness is regarded as the fundamental essence of the structure of mentality, and when we view it in the real modality of psychic experience, we can refer it to denkpsychological terms of Aufgabe (problem), Absicht (purpose), latente Einstellung (latent mental-set), Bewusstseinslage (mental attitude), determinierende Tendenz (determining tendency), Bewußtheit (awareness), Wissen (knowledge), Gedanken (thought) etc.

We can deduce from these psychic structures that all of them indicate the intentionality of psychic action dependent on the meaning-structure of consciousness, and when we moreover reflex and analyse the structure of it we can filter down its intentionality to the naive modality of the naively set-to (naiv-gerichtet-sein-zu) psychic action, which is no longer accompanied with psychic contents. We can define this modality of psychic action as the basic essence of the psychic act. We can recognize this ultimate modality of psychic act by minute introspection at the moment of a critical situation, that is, in the case when notwithstanding the vehement intention to seize the object (contents) of consciousness we can not seize it easily and we feel somewhat irritated. (As I have already written a treatise on this subject I avoid repeating it<sup>1</sup>.) And this modality of naively set-to action has the motive quality of action, which is complicatedly compound of or undifferentiated in affective and volitive character, that is to say, the volitive character to seek for a psychic object (contents), and the affective character which, occurring (during the search for an object) from suffering from absence or incomplete existence of the object and eventually changes into – viz. reduces to – the volition to action. Thus we consider this psychic modality of naively set-to action as the ultimate modality of psychic act and when we judge it moreover in the relation of mind and body, we shall be able to realize that this modality is at the original state of

<sup>1</sup> cf. M. Abe, Psychology of thinking. 1937, espec. p. 59–, p. 166–. And also cf. H. Chiwa, Psychological quality of act. Report of the II. Meeting of Japanese Psychological Association. 28. 1929. Also by the same author, On the existent form of the psychological act-experience. Report of III. Meeting of Jap. Psychol. Association. 26–. 1931.

psycho-physical-neutrality and, in fine, the modality will be considered as the original and ultimate, viz. a priori modality of every psychic activity.

## II The multiplicity of actions of consciousness

### Introduction

Our next problem is the multiplicity of mental activity, which is fundamentally performed on the multiple or simultaneously complicated state of above described modality of psychic action. The multiplicity of actions of consciousness may be said to be the general form of activity of consciousness which, notwithstanding, has hitherto been comparatively neglected in psychological study.

When we observe and introspect ordinarily the activity of consciousness we can recognize that activity of consciousness is really not performed in a simple state of psychic action but in a multiple state, at which manifold psychic actions are co-existently (combiningly) preformed. We can see this phenomenon, for example, in our various behaviors of daily life. The psychic, functional form of our behaviors is ordinarily not of simple modality but of multiple viz. simultaneously manifold modality of consciousness. That, notwithstanding such character of our psychic activity, we are not especially conscious of its multiplicity and feel rather its simplicity (viz. its unity), is fundamentally due to the fact that the structure of consciousness is *ganzheitlich* (whole). Really the activity of consciousness is spontaneously so well adjusted, namely performed at the state of so called *apperception*, that we are not aware of the multiple complexity of manifold psychic actions. Moreover the other reason, mentioned above, is that our manifold psychic activity has daily been disciplined to cooperate automatically. When we consider this fact from the realistic point of view, we may say that it is a natural result which arose from the necessities of daily life, namely from the economy of consciousness that obtains

facilities in daily life from the state of our psychic activity, actions of which are performed simultaneously differentiating.

Our problem to be treated here, psychologically has names of the range of attention, the field of consciousness, the range of consciousness, *Mehrfachleistung* (manifold performance) and *Simultanhandlung* (simultaneous act) etc. Concerning this problem we consider to what extent manifold actions of psychic, complicated activity are possibly done and how they are performed. Considerations concerning this problem are classified from the character of the procedures and the objects of observations. The first main part of our considerations is, for example by Westphal (*Über Haupt- und Nebenaufgaben bei Reaktionsversuchen. Arch. ges. Psychol* 21. 1911). which is originally referred to the consideration by Külpe (*Versuche über Abstraktion. I. Kongressbericht der experimentellen Psychologie. 1904. 56-*) and Grünbaum (*Über die Abstraktion der Gleichheit. Ein Beitrag zur Psychologie der Relation. Arch. ges. Psychol. 12. 1908.*), which treated so-called abstraction-experiment. Generally speaking, the first main part is to observe the extension and degree of activity of contents-consciousness from the basis of the activity of cognition and discrimination concerning the complicated construction of contents of given stimulus. While the second main part observes simultaneous activity of manifold different psychic actions (mostly concerning two simultaneous actions), which are made to take place simultaneously. And in the observations of the second main part, observations of various simultaneous combinations of psychic activities between many kinds of performances, from intellectual performances to reactive actions, are carried out, and the method of combination is various: between a higher intellectual performance and a lower one, for example, performance of thinking during calculation by Kräpelin's calculation-book, or between two intellectual performances of the same degree, or between various reactive performances to react to the presentations of stimuli which, express some signal, for example simultaneous reaction of left hand to one stimulus-presentation and right foot to the other stimulus-presentation; or simultaneous reaction of visual tactual

sensation-reaction, and so on.

Concerning these observations, above all the problematical point is, — to what extent is the simultaneous activity of manifold actions executed, namely whether the execution of manifold psychic actions is strictly simultaneous. Ach compared the consideration of Schulze of Göttingen with that of Mager of München (under Prof. Pauli), which is deemed by Ach to have defects dependent on the observation-procedure and -equipment<sup>1</sup>. Concerning this problem the considerations of the Göttingen school show strictness in observation under the leadership of Ach. Ach considers other observations also, though these authors themselves deem their treatises on simultaneously manifold-activity, not exactly as observations concerning simultaneously manifold activity but concerning manifold, *reihenfolge* (successive) activity<sup>2</sup>. We can recognize the truth of this according to the quality of the object of observation. Ach's opinion is right as far as it concerns the category of activity of perceptive discrimination. The important point in our observation is that simultaneously manifold activity in its full strict sense must take place, and for this purpose technical observation-procedure must be used. To this end it seems in common sense, that simultaneously manifold presentation of stimuli is necessary. But the truth is the contrary. For example to the performance of subjectively simultaneous activity of visual and tactual reaction, we must present visual stimulus objectively 36  $\sigma$  longer than tactual stimulus<sup>3</sup>. If psychic phenomenon of manifold activity is not simultaneous, it must be successively manifold or even intermittently manifold. Thus the simultaneity must be carefully watched especially in the simultaneous observation of intuitive discrimination of perceptive reactions. But in the category of higher mental (intellectual) activity (process), for example such as thinking, the simultaneity of these manifold psychic activities need not be so strictly observed, for these

<sup>1</sup> cf. N. Ach, *Zur Frage der Enge des Bewußtseins*. Arch. ges. Psychol. 74. 1930. p. 261—. Also, N. Ach, *Analyse des Willens*. 1935. p. 267—.

<sup>2</sup> cf. N. Ach, *Analyse des Willens*. p. 254—.

<sup>3</sup> cf. N. Ach, *Analyse des Willens*. p. 271. f.

activities have a deep psychic structure, for example such as psychic organization of meaning-structure which is individually formed in one's life experience. They lie beyond the psychic momentary (intuitive) character, and simultaneous strictness in the above mentioned observations concerning perceptive activity has not so much importance in this case. Thus, to the observations concerning simultaneous activities of *unanschaulich* (not intuitive), higher mentality, other observations dealing with time-character, apart from those dealing with intuitive character in perceptive activity, must be taken.

Some psychologists treated about the degree of consciousness from the structure of so-called consciousness and unconsciousness. This problem connects fundamentally with our problem. But I tried here to describe manifold degree — if I may use the word degree — of consciousness at the modality of psychic activity above the so-called threshold of consciousness.

### **Experimental observation**

The procedure :

I laid stress upon the observation concerning simultaneously manifold activity of intellectual character. The observers are six scholars of the psychological institute. The observations are as follows : I. series : concerning simultaneously manifold, intellectual performances of two kinds, and II. series : concerning simultaneously manifold performances between so-called work-performances and intellectual performances, which are set simultaneously during work-performance. The observations belonging to (I) are (a) manifold activity to catch the meaning of Japanese composition and at the same time to calculate the number of the letters of the composition, and (b) simultaneously manifold activity that gives observers intellectual performances, for example judgment during the calculating by Kräpelin's calculationbook. The observations belonging to (II) are simultaneously manifold performances combined between on the one hand, intellectual performances, such as multiplication and solving problems of judgment, and, on the other hand, (c) so-called



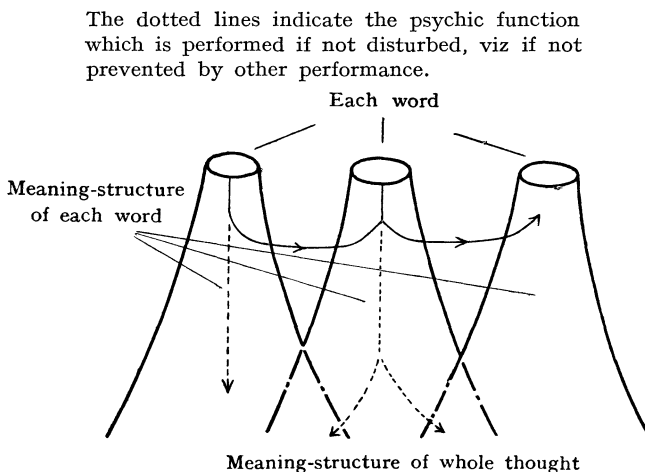
form-board-test, (d) match-board-test, and (e) medal-box-test. The general instruction is as follows : "I give you manifold activity. Please do the manifold activity simultaneously as well as possible."

Observed results :

#### I. series

In the experiment (a) I observed the simultaneous function, on the one hand to catch and comprehend the meaning of some Japanese composition and on the other hand to calculate the number of the letters of the composition. Generally speaking in reading we spend our mental energy mainly in the understanding of the meaning of the composition and if the composition is hard to comprehend, much more mental energy must be spent. The comprehension of the meaning of composition means the function to catch the represented thought, and when we analyse it still more, there is the leading fundamental function, which is connectingly related to the deep psychic meaning-structure in the individual mental structure. But when both performances are done simultaneously, the other performance (to calculate the number of the letters) prevents this comprehending performance from functioning completely, namely its deep

Fig. 1



fundamental function viz. the function to touch the deep psychic organization of the meaning-structure. In other words the main reason that the calculating disturbs the comprehending is that observers must maintain their consciousness of calculation and must sum up the number of the letters one by one. As shown in the symbolizing schema of Fig. 1, the intention (by perceiving each word) to touch deeply the inner meaning-structure and to form the psychic organization of comprehending, are prevented and directed shallowly to the next word-reading for the sake of the maintenance of consciousness of numbering letters.

According to my observation, suggestive presentation of stimuli of words which are used in the composition, to give rise to reproductive association is effective at the single performance of the comprehending only but it is without effect at the simultaneously manifold performances. This means that the inhibited degree of one performance (for example the comprehending) effected by the other performance (such as the calculating) is very intense; generally speaking the simultaneously manifold performances inhibit each other from the sufficient execution of the other performance. To attain the execution of this simultaneously manifold activity, some technique must be used. The technique is that we lay stress on the performance of calculating and make the performance of comprehending subordinate, in other words the technique of grasping the represented thought quickly and completely – therefore the comprehending is not performed sufficiently deeply. By this technique the whole execution is eventually attained. Therefore when the represented thought is difficult to comprehend, the simultaneously manifold activity is considerably disturbed. In this connection, the construction of the Japanese sentence is different from that of the European. For example the European word is symbolically caught as a whole, but the Japanese word must be caught letter by letter. Therefore European composition is easier than Japanese as the stimulus observed.

Some individual and typical observations in experiment (a):

Observer A.: he felt some difficulty in the execution of the twofold activity, and introspected that at first to perform one act seemed to give up another act. But afterward he introspected he might be able to accomplish it well after some practice. He introspected that it was not so difficult in the first line to execute the twofold activity, but to continue to the next line or on to the following lines is difficult. This is due especially to the fact that to maintain the consciousness of numbering letters continuously on to the following lines is not so easy.

Observer K.: this observer is the same type as observer A. He introspected that the catching of the meaning is done at the instant of reading of some part of the composition but the meaning of the part caught did not remain long in mind. Thus he felt difficulty in continuous catching or maintenance of the whole meaning of the composition. On the whole he had to lay more stress on the counting of letters than on the catching of the meaning, to execute the twofold activity completely.

Observer S.: he was able to perform the twofold activity comparatively smoothly. He laid stress from the beginning of the manifold activity on the counting of letters. To catch the meaning is treated by him comparatively lightly.

#### Experiment (b).

The calculating by Kräpelin's calculation-book is generally done in a monotonous manner. When other performance is tested, for example judgment, which does not require observers to answer promptly the calculating is to some extent disturbed but not to any great degree. But when other performance of calculating is tested like  $25 \times 15 = ?$  which is to be answered promptly, then the procedure of the simultaneously manifold execution is as follows: the multiplication  $25 \times 15$  is performed in the interval between each calculation in the book, namely . . . .  $8 + 3$  (calcul. in the book) —  $25 \times 10 = 250$  —  $3 + 9$  (calcul. in the book) —  $25 \times 5 = 125$  —  $9 + 7$  (calcul. in the book) —  $250 + 125 = 375$  —  $7 + 5$  . . . . . The process of the multiplication does not usually go on so smoothly as this and is very often postponed to the following intervals; for example harder mental calculation, like  $25 \times 5$  or

250+125, is not fully executed at one interval, that is, very often it is disturbed half-way by the performance-intention of the other performance. The intervals which lie between the activity of the other performance — in this case the intervals between each calculation at the book — are necessary for simultaneously manifold activity and arise spontaneously to make the process of the activity possible. This mechanism arises too, in the latter observations of II. series. Maria Schorn<sup>1</sup> researched into simultaneously manifold activity combined between the performance by Kräpelin's calculation-book and some other performances. Her observations are interesting. Our readers should refer to them.

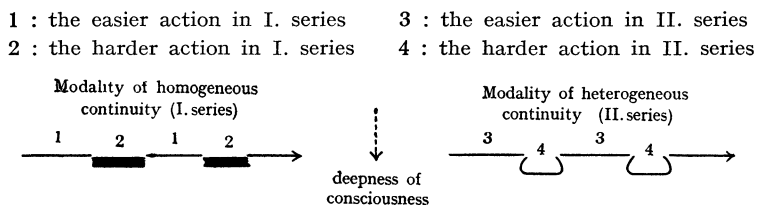
## II. Series

To execute work-performances (mental-work in our case), the most necessary motive is the consciousness of a task or the intention to execute performance. Unless a work-performance is extremely complicated, there is some fixed automatic routine-mechanism concerning the work of the performance. When other intellectual performance is tested simultaneously with a work-performance, the routine-mechanism of the work-performance is considerably disturbed or is even broken. In this case too, simultaneously to execute manifold performances totally and fully means uselessly to disturb the whole process of the execution. To execute this simultaneously manifold activity, as we have seen above, the intervals between each action of the work are applied to the execution-period(place) of the other intellectual performance. But in this case the method of combination is heterogenous, namely it is not homogeneous as in I. Series (viz. the combination between intellectual performances), but the heterogenous combination between work-performance and intellectual performance. The intellectual performances in II. series-observations are the calculating of multiplication and solving of problems of judgment. The quality of the interval in the experiments of I. series is caused by the intellectual performances, while that of II. series is caused by the work-

<sup>1</sup> Schorn, M., Experimentelle Untersuchungen über die Mehrfachhandlung. Zeitsch. Psychol. 108. 1928.

performances, and the modality of continuity between the two kinds of actions of the two performances is homogeneous in I. series, but heterogeneous in II. series. Here lies the difference between the qualities of psychic activities. Generally speaking, easiness of performance is felt rather in the heterogeneous activity between work-performance and intellectual performance. In other words, to compare the psychic structures of manifold activities in I. series and II. series, the easier performance (action) — the number-calculating in (a)-observation, the calculation by the book in (b), and the work-performances in II. series-observatoin — is carried on in the shallow layer of consciousness, while the harder, intellectual performance (action) — the comprehending of meaning in (a), mental calculation in (b) and the intellectual performances in II. series-observation — is carried on in the deep layer of consciousness. We shall be able to indicate this modality by the next schema.

Fig. 2



In II. series-observations we used three kinds of work-performances, form-board-test, match-board-test and medal-box-test. As regards the intellectuality of these performances, the form-board-test is the most intellectual and the match-board-test is the least. Therefore it seems that the simultaneously manifold activity between the form-board-test performance and an intellectual performance is the hardest. But the medal-box-test is not so simple. We call this test by the other name of a test of visual-tactual-discrimination. That is, the observers use the sensations both of touch and vision, to perform the test. The difficulty of this test lies in the fact that it may be said

that this test itself requires a kind of simultaneously manifold activity of tactual and visual sensations. Therefore the simultaneously manifold activity between the medal-box-test performance and some intellectual performance is not very easy. Generally speaking, to give rise to simultaneously manifold activity between work-performance which has a greater degree of intellectuality, like the form-board-test, and an intellectual performance is a harder task for observers.

Some individual and typical observations in II. series-experiments :

Observer A. : he introspected that at the twofold activity between work-performance and intellectual performance the work-performance became automatic and yet to accomplish the intellectual performance – especially the calculation – he had to try again and again (he tried the calculating three times anew). And though he felt uneasy at the simultaneously manifold performances of I. series-observation, he felt somewhat easy at the performances of II. series-observation. This means that the execution of work-performance becomes automatic and the heterogeneous combination of performances of different kinds is generally felt easy by performers. He introspected too, that though the manifold intentions to perform the simultaneously manifold activity exist (work consciously), the real activity is not done so well.

Observer S. : he introspected that he performed the intellectual performance at each interval of each act of the work-performance. He performed the simultaneously manifold activity between work-performance and intellectual performance pretty well. He distributed the psychic energy to each performance skillfully. The psychic type of this observer is the so-called extraverted type. To execute simultaneously manifold performances observers of this type take generally less time than observers of so-called introverted type. As to the typological observation, refer to the later description.

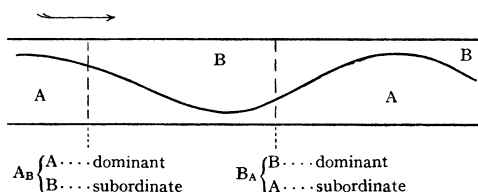
### General treatise

As we have seen above, we felt considerable difficulty in the

simultaneously manifold activity. It seems the natural sequence that to perform one act means to neglect the other act, but when we observe its structure minutely as we have seen above, simultaneous multiplicity of psychic actions is not impossible and one who feels its difficulty very much at beginning of performance becomes able to raise the degree of execution.

To give our conclusions from the above consideration concerning the structure of manifold psychic activity, the activity of consciousness is performed, so to speak, in some psychic breadth. The meaning of the existing terms like the range of attention, the field of consciousness, belongs to static, cross-sectional observation concerning the structure of consciousness. But when we consider the activity of consciousness at the dynamic state of continuation of consciousness, we can see that the continuation of consciousness-activity is not performed at the state of simple linear continuity, but at the state of continuity with some breadth, viz. in the process-form in which manifold psychic actions are simultaneously performed. Thus the process-form of the simultaneously manifold activity is as follows (we discuss here in the form of two manifold actions): when A performance is dominant, B performance exists (works) subordinately and at the next moment B performance is dominant, while A performance exists (works) subordinately. The meaning of “dominant” (haupt) and “subordinate” (neben) is represented in the meaning of larger and smaller quantity (degree) of psychic activity. To consider this relation in the total quantity of psychic activity, we can represent it in the relation of psychic breadth, as indicated in the next schema (in this connection we can say generally that the breadth of our consciousness is personally almost constant

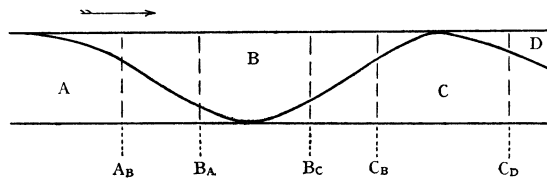
Fig. 3



except in extraordinary conditions<sup>1</sup>.

This is the result obtained in the experimental observation. Generally speaking, in the experiment of simultaneously manifold activity each performance has the nature of inhibiting the other performance. This is due to the fact that experimental performances are set to observers from the outside, though this is unavoidable in the experimental method. That is, we can see somewhat unnatural modality of consciousness in the experimental observation. But at the natural state of consciousness in daily life, we can see that consciousness has the spontaneous modality of simultaneously manifold activity. When we observe generally the simultaneously manifold activity at the ordinary natural state of consciousness we shall be able to indicate its process-construction in the next schema.

Fig. 4



That is to say, the dominant psychic act appears in succession, and correspondingly some subordinate psychic act is simultaneously performed. We can represent this proceeding-formula of consciousness-activity as  $A_B-B_A-B_C-C_B-C_D-\dots$ . Thus the activity of consciousness, which seems at sight to be some linear proceeding-formula like  $A-B-C-D$ , has in detail the quality of continuation in this manifold modality. Namely

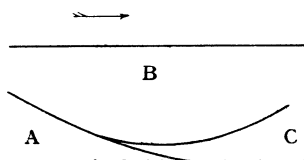
<sup>1</sup> But in some extraordinary condition, for example in an intoxicated state, the breadth of consciousness becomes greater than usual, therefore various ideas associate or gush forth more and more actively. Thus we can say from our consideration that consciousness at this state flows in rapid succession.

And as to the psychic breadth of consciousness we can see its form in acts (movements) acted — and expressed — by performers, and by the introspection of performers, but generally we feel difficulty in finding its outer existence at the inner intellectual act, because it is not expressed outside in the form of movement.



the formation of continuation of consciousness means that thus manifold motive modality to action (intention), which exists already, appears in turn to become the chief act, and lastly disappears and alternates with the next one. In truth the continuation of consciousness is in this way possible. And when we analyse moreover the modality of continuity of actions above described, we shall be able to described it in the next schema.

Fig. 5



Thus the motive modality to C-action sprouts already before A-performance ends. Manifold motive modality to action (intention at manifold psychic modality) is thus multiple.

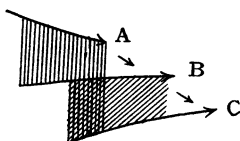
It may seen that we discuss mainly the phenomenal process of simultaneously manifold activity of consciousness. But of course under this phenomenal structure lies the fundamental, inner mechanism of continuation of performance-intention. The above schema in Fig. 2. seems at first sight to indicate the intermittence of each performance, but we must preresent the process as indicated in the schema, when we analyse the phenomenon differentiatingly. To make the continuity between different kinds of performances possible, each performance-intention must act inwardly and continuously. Namely the seeming sudden, alternating occurrence of each performance must in fact be supported by the inner duration of each performance-intention. In other words, the seeming intermittent absence of one performance-intention during the other performance really means on the contrary its psychic inner duration. Fundamentally in this point we can say that consciousness has some breadth.

When we consider the modality of our consciousness in daily life the activity of consciouness is multiple as we have seen above, viz. besides the chief activity, accompanied activity takes place

subordinately (simultaneously). We experience wontedly this natural occurrence of psychic accompanied (subordinate) activity — for example the case when during working we think of other things or the general, functional form of our behaviors in daily life, which are performed simultaneously differentiating, etc. —. In other words, the mechanism of simultaneously differentiating (manifold) activity of consciousness is the natural consequence, which is dependent on the complicated modality of life-consciousness of the present age. It may be said that is is useful for synthetic judgment concerning various kinds of things in daily life, and on the other hand it may mean sometimes the sad disunion of consciousness-activity. And to give another instance in practical life, as in the case when we drive some complicated machinery, simultaneously manifold psychic activity must be performed. This concerns to the important problem of concerted (cooperated) action (movement) in working.

We have shown already that the process of the activity of consciousness is not performed in simple linear form, and we indicate it in the schemas in Fig. 2.—5. When we introspect minutely, we can observe this psychic structure at the natural state of consciousness in daily life. We shall here describe in another way the modality of continuity of manifold psychic actions in the continuation of consciousness. We shall be able to indicate it in the next schema.

Fig. 6



That is, the total process of consciousness consists of psychic actions A, B, C, . . . , viz. A shifts to B, B shifts to C and so on, and thus psychic activity goes forward. The shaded parts indicate the common correlation between each actions. To consider the correlation between A and B or A, B and C etc.— or in other words the continuation of consciousness—, we can say that

consciousness has breadth. This is another expression of the consideration which we have already treated above. For example when we observe the mechanism of so-called association of ideas, or generally the proceeding form of consciousness, we shall easily comprehend its construction by this mechanism.

Thus we can say generally that consciousness has breadth, and the breadth of consciousness, namely psychic multiplicity of continuously-following, accompanied actions, makes the continuation of consciousness possible. In other words, to analyse the psychic activity of consciousness, psychic activity is multiple, that is, manifold actions are simultaneously (differentiatingly) performed.

In this connection we can mention synesthesia (so-called secondary sensation) as the typical, distinct example of our thema. That is, synesthesia is a psychic phenomenon, which exemplifies the multiplicity of psychic activity.

Lastly we shall touch on the typological consideration in our problem. Generally speaking, persons of so-called sanguine temperament can do simultaneously manifold activity well. They are by nature rich in ability to execute the manifold activity ingeniously. To compare the method of pursuing simultaneously manifold activity by persons of so-called melancholic temperament and by persons of sanguine temperament, persons of sanguine temperament efficiently apportion psychic energy of action to each psychic action so as to accomplish the manifold activity well, while persons of melancholic temperament tend to concentrate the psychic energy on one action and make the whole execution of manifold activity difficult. To describe the real modality of execution of manifold activity, for example in the experiment (a), persons of sanguine temperament give main psychic energy to the calculating of the number of letters and treat the comprehending of meaning lightly (subordinately), while persons of melancholic temperament try to distribute psychic energy so to speak equally to each action. Hence the manifold activity by them does not go on so smoothly (quickly) compared with persons of sanguine temperament, and there occurs conflict in their psychic treatment of simultaneously manifold activity.— Here I wish my readers to refer

to the preceding description concerning experimental observation.— To describe generally the difference between the method of distribution of psychic energy by each personal type, persons of melancholic temperament distribute equally, so to speak, psychic energy to each action, while persons of sanguine temperament apply more psychic energy to the harder action and less psychic energy to the easier. In the observations of II. series also, we can see the same relation. That is, persons of sanguine temperament apply more psychic energy to the intellectual performances and less psychic energy to the work-performances, while persons of melancholic temperament apply almost equal psychic energy to each performance. In other words, of course the method of personal distribution of psychic energy must be qualitatively considered. Mental activity of persons of sanguine temperament does not work deeply in the psychic structure, while that of persons of melancholic temperament tends to work deeply. In this point the former type feels less difficulty in the execution of simultaneously manifold activity, while the latter type feels more difficulty. Therefore the former type refers to the wider exterior of mental activity, while the latter type refers to the narrower exterior of mental activity, but its mental activity works in the deep layer of consciousness. And we can call the former type extraverted or *zyklothym*, by which psychic energy of mental activity is distributed widely and outwardly, and the latter type introverted or *schizothym*, by which psychic energy of mental activity is concentrated inwardly and is directed deeply to one's inner self according to Jung's and Kretschmer's opinion. Thus according to the personal difficulty of execution of simultaneously manifold activity we can classify the two main representing opposite personal types.

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(Received 20. XI, 1937)